CALL FOR APPLICATIONS: RESEARCHER

Job/position/grant:

Job reference:	AE2023-0102 (ATE - CPES)
	INESC TEC - Instituto de Engenharia de Sistemas e Computadores, Tecnologia e Ciência
Job/position/grant:	RESEARCHER
City:	Porto
Research field:	Main: ENGINEERING
	Sub: Electrical engineering

Job summary:

INESC TEC is accepting applications for 1 RESEARCHER job in the Engineering	
Project:	Alliance for Energy Transition
Scientific Advisor:	Justino Miguel Rodrigues
Start Date:	2023-04-17
Location:	INESC TEC, Porto, Portugal

Job description:

Work Area: Engineering

Project overview: - Specification of high-performance power conversion systems according to the state of the art; - Design and specification of appropriate converters for smart inverters and chargers; - Integration of smart management and control algorithms through embedded local systems for standalone (offline) and interconnected (online) operation; - Implementation of operating modes compatible with hierarchical and decentralized control systems to support the operation of the electrical distribution networks or energy communities; - Production, testing, validation, and demonstration of technological solutions developed for different projects.

Objectives: - Define requirements for power conversions systems for different types of application; - Design, specification and implementation of power conversion systems (e.g., inverters, electric vehicle chargers, etc.); - Development of management and control algorithms based on centralized and distributed strategies; - test and validation in laboratory and real demonstration environments;

Academic Qualifications:	Bacharel or Master electrical and computer engineering; electronics; power electronics; energy systems; other related
Minimum profile required:	- Experience in the specification, design and implementation of power electronics systems, MPPT algorithms and battery management, and printed circuit boards; - Experience in simulation (e.g. MATLAB/Simulink) and programming of real-time controllers for power conversion systems (e.g. Texas Instruments C2000); - Experience in the implementation and development of communications based on protocols MODBUS (TCP/RTU), CAN, REST, among others;
Preference factors:	- Experience in the development and testing of embedded systems based on Linux and programming (e.g Python, C); - Experience in testing electronic power converters in laboratory and field environments with thermography equipment, power/energy analysis, efficiency and electromagnetic compatibility; - Fluency in English (spoken and written);

Funding Entity:	ATE funded by IAPMEI, Co-financed by Component 5 - Capitalization and Business Innovation, integrated in the Resilience Dimension of the Recovery and Resilience Plan within the scope of the Recovery and Resilience Mechanism (MRR) of the European Union (EU), framed in the Next Generation EU, for the period 2021 - 2026.
Type of contract:	Uncertain term contract

The hiring shall be governed by what is stipulated in the legislation in force regarding uncertain term employment contracts and by INESC TEC norms.

Selection criteria:	The selection of the candidates will be based on the following criteria, in descending order of consideration: a) Relevant Curriculum in the concerned field of this tender b) Proven experience.
Selection Jury:	President of the Jury: Prof. Justino Miguel Rodrigues; Member: Prof. Ricardo Jorge Bessa; Member: Prof. Nayara Brandão de Freitas;
Notification of results:	The results of the selection process will be sent to the interested by electronic mail.
Application period:	From 2023-03-15 to 2023-03-28
Application submission:	Electronic form filling in www.inesctec.pt in the section Work with Us

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